

## ABSTRACT

In a process to make dithiodiglycol by oxidation of  $\beta$ -mercaptoethanol with sulfur, an improved product is recovered when a 1-10 mol% excess of  $\beta$ -mercaptoethanol is used and hydrogen sulfide is removed by vacuum or nitrogen sparge. A typical product contains 88.1 mol% (92.0 wt%) dithiodiglycol, 2.3 mol% (2.9 wt%) trithiodiglycol and 9.6 mol% (5.1 wt%) unreacted  $\beta$ -mercaptoethanol. Reaction of this product with 35 to 50 wt% solution hydrogen peroxide reduces residual  $\beta$ -mercaptoethanol to less than 0.02 wt% mercaptan. Residual water of about 3.6 wt% after hydrogen peroxide treatment is reduced to less than 1 wt% by vacuum stripping and/or nitrogen sparge or with a wiped film evaporator.